

Supplemental Information

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Title: Sonochemical Degradation of Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoate (PFOA)
in Landfill Groundwater: Environmental Matrix Effects

Number of pages: 6

Number of Figures: 4, S1- S4

Number of Tables: 1, S1

FIGURE S1. $\ln([PFOS]_t / [PFOS]_i)$ (a) and $\ln([PFOA]_t / [PFOA]_i)$ (b) vs. time in minutes during sonochemical degradation in Milli-Q water (\bigcirc) and landfill groundwater (∇) under 612 kHz, 250 W L⁻¹, Ar, 10 °C for $[PFOS]_i = [PFOA]_i = 100 \mu\text{g L}^{-1}$.

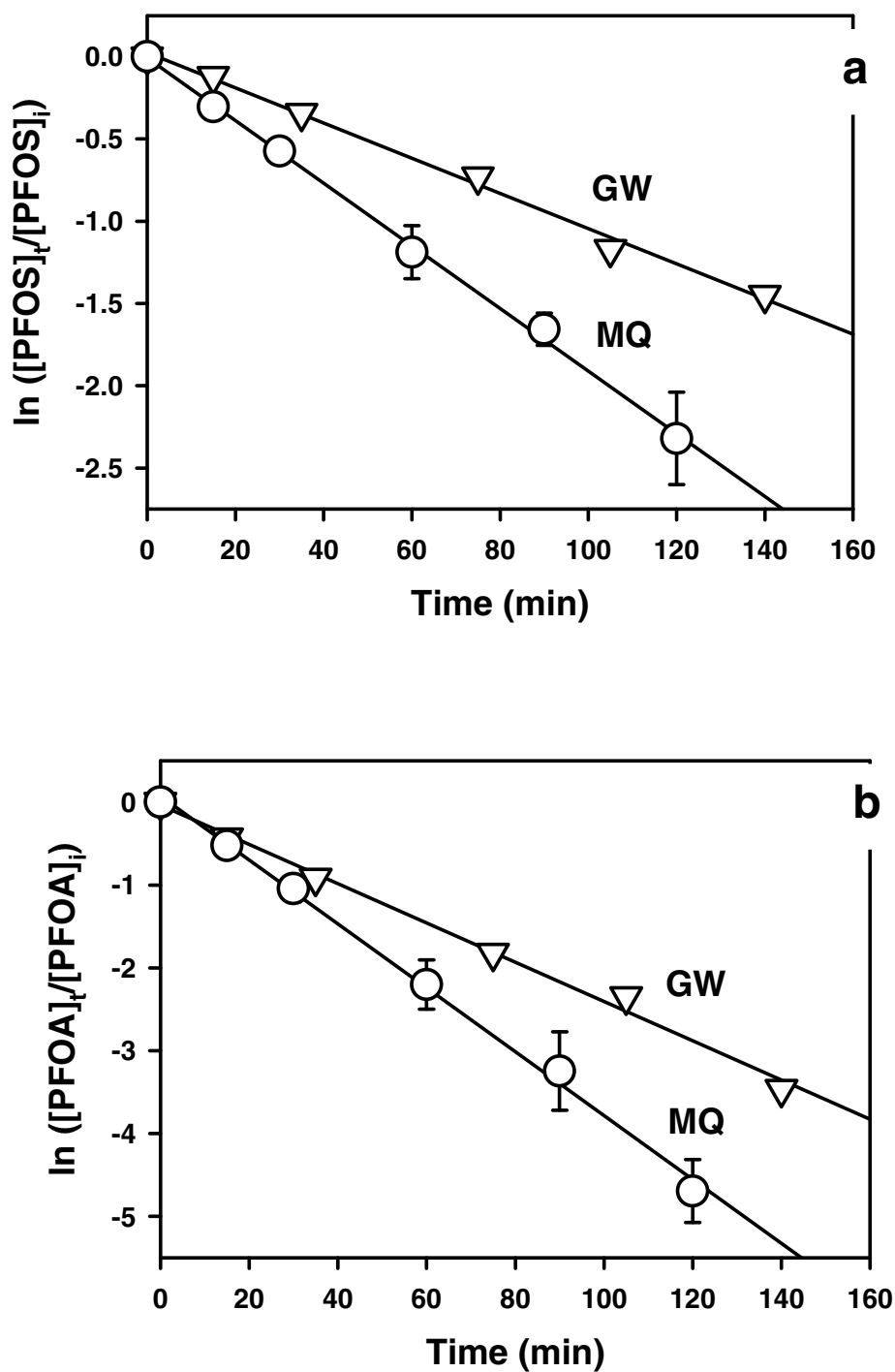


FIGURE S2. $\ln([PFOS]_t / [PFOS]_i)$ (a) and $\ln([PFOA]_t / [PFOA]_i)$ (b) vs. time in minutes during sonochemical degradation in Milli-Q water under Ar (\bigcirc), O_2 (∇) and 2.5% O_3 in O_2 (\square). Other reaction parameters are: 354 kHz, 250 W L⁻¹, 10 °C, and $[PFOS]_i = [PFOA]_i = 100 \mu\text{g L}^{-1}$.

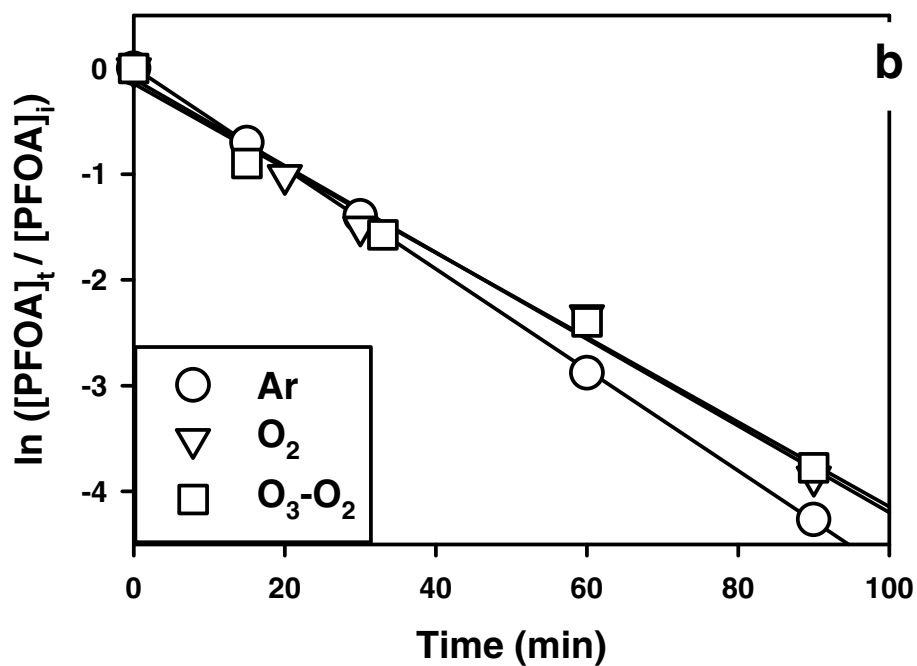
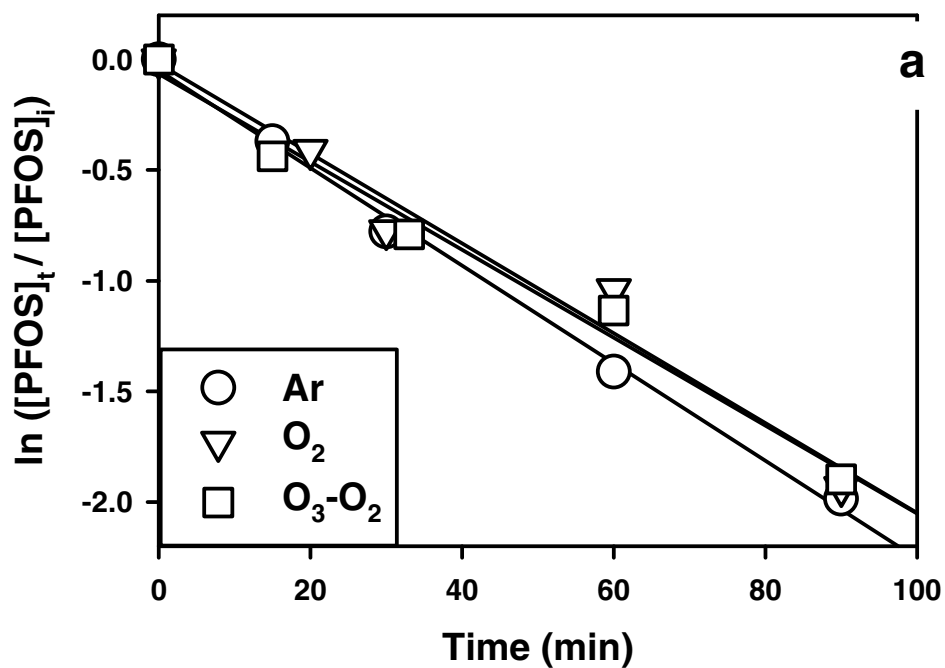


FIGURE S3. The gas phase specific heat capacity $C_{p,g}$ from $T = 200$ K to $T = 1500$ K (a), and the Henry's law constant k_{iaw} from $T = 273$ K to $T = 373$ K (b), for methanol (MeOH, \circ), acetone (AC, ∇), isopropyl alcohol (IPA, \square), ethyl acetate (EA, \diamond), and MTBE (\triangle).

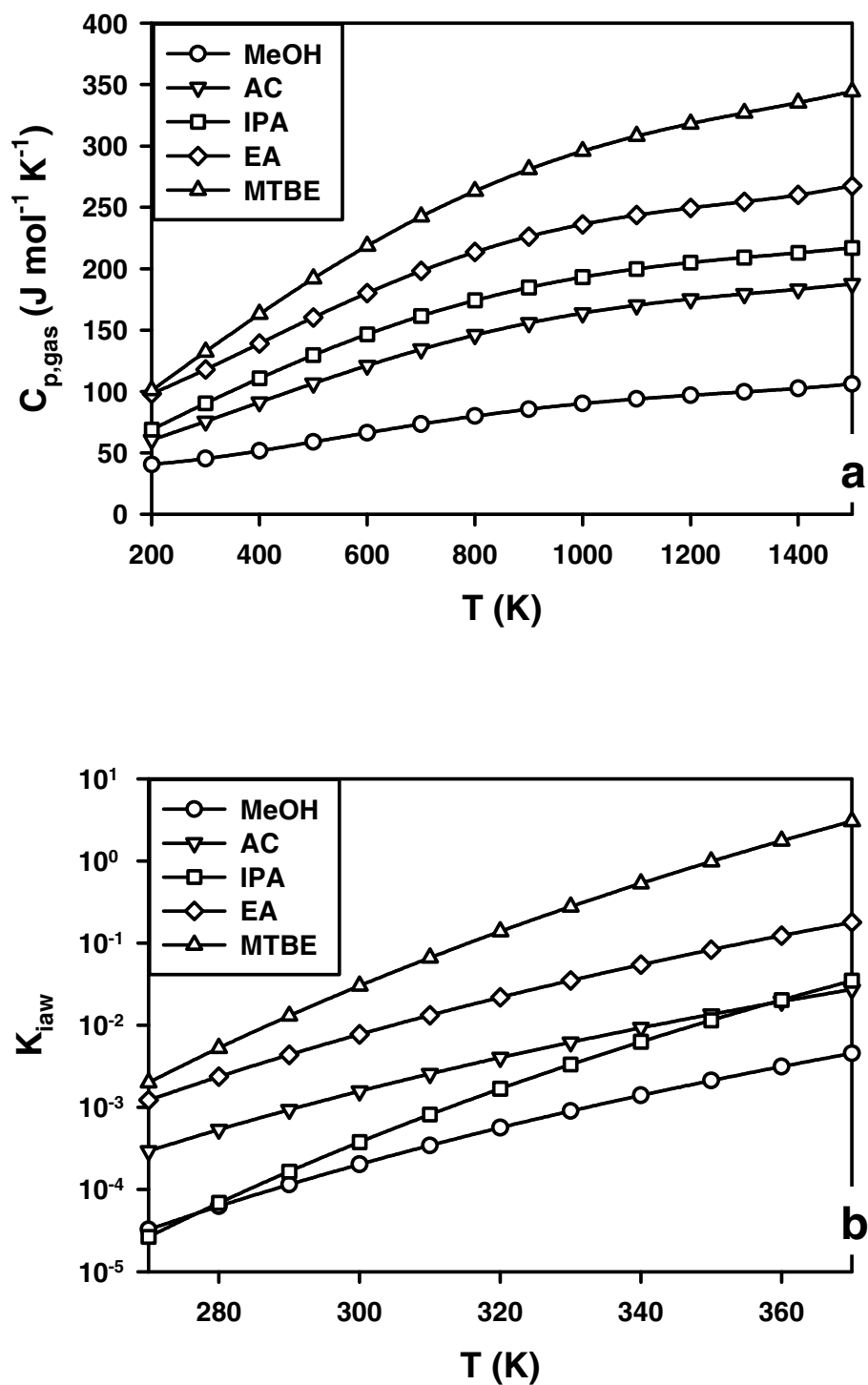


FIGURE S4. The LC/MS calibration curves for PFOS (a) and PFOA (b) from 1 to 200 ppb

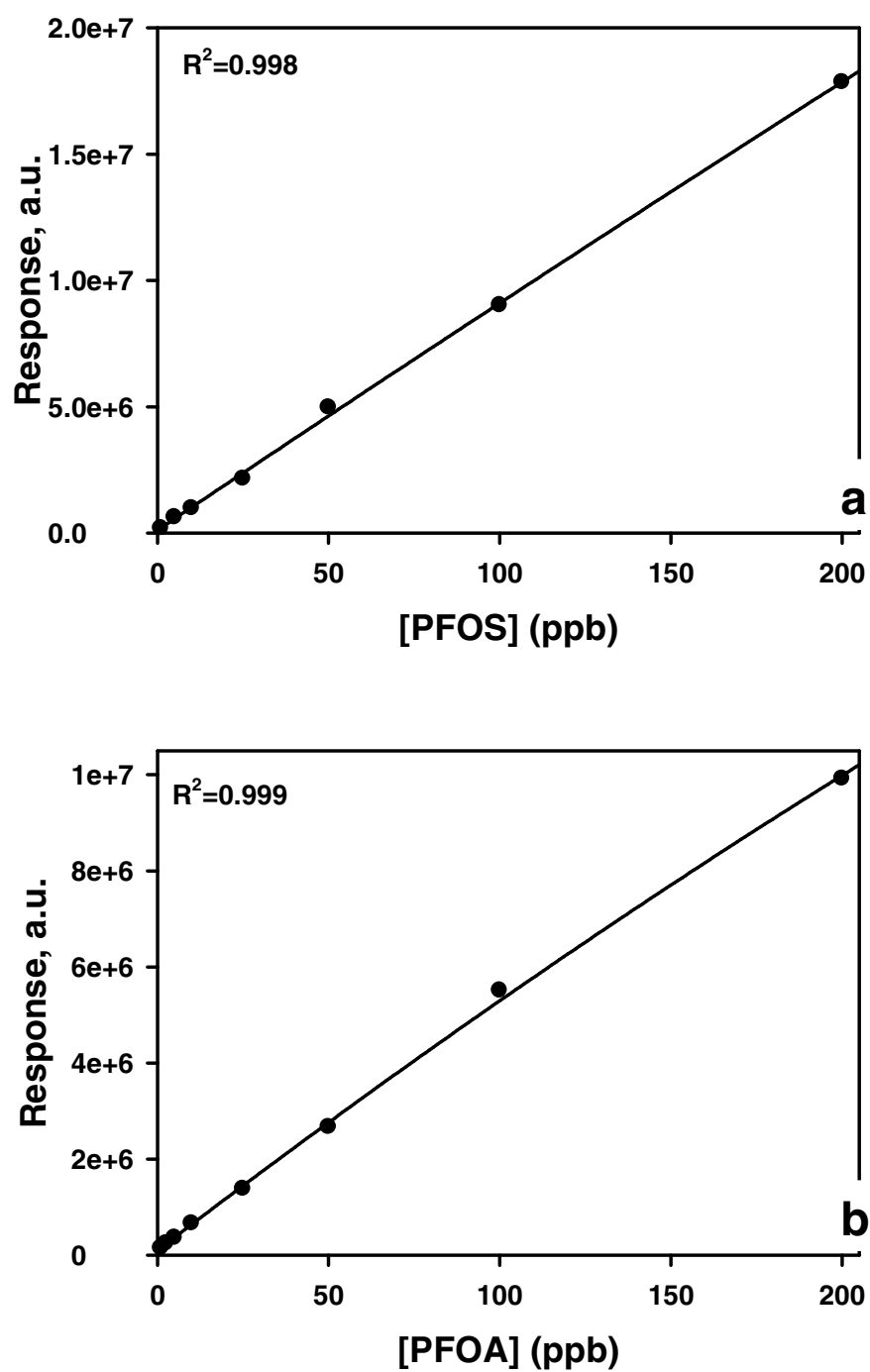


Table S1. Representative analytical results of quality control samples

Standard concentration (ppb)	Average measurement (ppb) (n ≥ 4)	Standard deviation (%) (n ≥ 4)
PFOS		
10	9.5	3.3
25	24.1	5.8
50	53.3	2.3
100	104.3	4.6
PFOA		
10	9.6	6.9
25	26.5	3.7
50	51.4	3.7
100	106.1	3.4